AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1 (withdrawn): A method of detecting a prospective abnormal shadow in an image at a predetermined detecting level, wherein the improvement comproses

the step of changing the detecting level according to prior informatin on the object.

2 (withdrawn): Amethod as defined in Claim 1 in which the prior information is at least one of information obtained from meeting with the patient, infomration obtained from examination by touch and the past history of the patient.

3 (withdrawn). A method as defined in Claim 1 in which the detecting level is changed part by part of the image.

4 (withdrawn). A method as defined in Claim 1 in which the image of the object is a mammogram.

5 (previously presented): A method of detecting a prospective abnormal shadow in an image of an object at a predetermined detecting level, the method comprising:

changing the detecting level according to photographing conditions under which the image of the object is taken,

wherein the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is photographed under pressure, whether a grid is used, the kind of the grid used, and the magnifying power.

6 (canceled).

7 (original). A method as defined in Claim 5 in which the detecting level is changed part by part of the image.

8 (original). A method as defined in Claim 5 in which the image of the object is a mammogram.

9 (withdrawn). A system for detecting a prospective abnormal shadow in an image of an object comprising a prospective abnormal shadow detecting means which detects a prospective abnormal shadow at a predetermined detecting level, wherein the improvement comprises that

there are provided a prior information input means through which prior information on the object is input, and a detecting level changing means which changes the detecting level according to the prior information on the object input through the prior information input means, and

that the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means.

10 (withdrawn). A system as defined in Claim 9 in which the prior information is at least one of information obtained from meeting with the patient, information obtained from examination by touch and the past history of the patient.

11 (withdrawn). A system as defined in Claim 9 in which the detecting level changing means changes the detecting level part by part and the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means part by part.

12 (withdrawn). A system as defined in Claim 9 in which the image of the object is a mammogram.

13 (previously presented): A system for carrying out the method of detecting a prospective abnormal shadow in a radiation image, said system comprising:

a prospective abnormal shadow detecting means which detects a prospective abnormal shadow at a predetermined detecting level,

a photographing condition input means for inputting photographing conditions under which the image of the object is taken, and

a detecting level changing means which changes the detecting level according to the photographing conditions input through the photographing condition input means,

wherein the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means, and

the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is photographed under pressure, whether a grid is used, the kind of the grid used, and the magnifying power.

14 (canceled).

15 (previously presented): A system as defined in Claim 13 in which the detecting level changing means changes the detecting level part by part and the prospective abnormal shadow detecting means detects a prospective abnormal shadow according to the detecting level changed by the detecting level changing means part by part.

16 (original): A system as defined in Claim 13 in which the image of the object is a mammogram.

17 (previously presented): An apparatus for detecting a prospective abnormal shadow in a radiation image of an object comprising

a photographing condition input means through which photographing conditions under which the radiation image of the object is taken is input,

a prospective abnormal shadow detecting means which detects a prospective abnormal shadow on the basis of the photographing conditions input through the photographing condition input means and radiation image data representing the radiation image of the object, and

the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is photographed under pressure, whether a grid is used, the kind of the grid used, and the magnifying power.

18 (original): An apparatus as defined in Claim 17 in which the prospective abnormal shadow detecting means comprises a detection processing condition determining section which determines the detection processing conditions on the basis of the photographing conditions, and a prospective abnormal shadow detecting section which detects a prospective abnormal shadow through a predetermined detection processing on the basis of the radiation image data and the detection processing conditions determined by the detection processing condition determining section.

19 (original): An apparatus as defined in Claim 18 in which the detection processing condition is a threshold value employed in the detection processing.

20 (previously presented): An apparatus as defined in Claim 25 in which the detection processing condition is a filtering property of a shape-dependent filter employed in the detection processing.

21 (original): An apparatus as defined in Claim 17 in which the prospective abnormal shadow detecting means comprises an image conversion section which carries out predetermined image conversion processing on the radiation image data on the basis of the photographing conditions, and a prospective abnormal shadow detecting section which detects a prospective abnormal shadow through a predetermined detection processing on the basis of the converted radiation image data.

22 (original): An apparatus as defined in Claim 21 in which the image conversion processing is frequency enhancement processing.

23 (original): An apparatus as defined in Claim 17 in which the photographing conditions is at least one of the kind of the grid employed in photographing, the tube voltage, the filter, the irradiation dose, the pressure on the object and the thickness to which the object is compressed.

24 (previously presented): An apparatus as defined in Claim 18 in which the radiation image is a mammogram.

25 (previously presented): An apparatus as defined in Claim 24 in which the prospective abnormal shadow is a prospective micro calcification shadow.

26 (withdrawn): A method as defined in Claim 1 further comprising detecting the prospective abnormal shadow in the image of the object at the changed detecting level.

27 (withdrawn): A method as defined in Claim 1, wherein the detecting level is changed by changing a value in an iris filter processing or by changing elements in a morphology operation.

28 (withdrawn): A method as defined in Claim 1, wherein the detecting level is changed by changing a threshold value in an iris filter processing or by changing values of structural elements in a morphology operation.

29 (previously presented): A system as defined in Claim 13, wherein the detecting level is changed by changing a value in an iris filter processing or by changing elements in a morphology operation.

30 (previously presented): A system as defined in Claim 13, wherein the detecting level is changed by changing a threshold value in an iris filter processing or by changing values of structural elements in a morphology operation.

31 (previously presented): A method as defined in Claim 5 in which the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is photographed under pressure, and the magnifying power.

32 (previously presented): A system as defined in Claim 13 in which the photographing conditions is at least one of the tube voltage or the tube current of the radiation source, the irradiating time, the product of the tube current and the irradiating time, the degree of compression of the object when the object is photographed under pressure, and the magnifying power.

33 (previously presented): An apparatus as defined in Claim 17 in which the photographing conditions is at least one of the tube voltage, the filter, the irradiation dose, the pressure on the object and the thickness to which the object is compressed.

34 (previously presented): An apparatus as defined in Claim 20 in which the photographing conditions are the degree of compression of the object when the object is photographed under pressure.

35 (previously presented): An appartus as defined in Claim 22 in which the photographing conditions are at least one of the kind of the grid employed in photographing, the tube voltage, the filter, the irradiation dose, the pressure on the object and the thickness to which the object is compressed.

36 (previously presented): A method as defined in Claim 5, wherein the image of the object comprises a plurality of parts and the detecting level is at one level at one of the plurality of parts and the detecting level is changed to another level for another of the plurality of parts.

37 (previously presented): A system as defined in Claim 13, wherein the image of the object comprises a plurality of parts and the detecting level is at one level at one of the plurality of parts and the detecting level is changed to another level for another of the plurality of parts.

38 (previously presented): An apparatus as defined in Claim 17, wherein the image of the object comprises a plurality of parts and the detecting level is at one level at one of the plurality of parts and the detecting level is changed to another level for another of the plurality of parts.

39 (new): A method as defined in claim 5, wherein the detecting level is directly changed according to the photographing conditions under which the image of the object is taken.

40 (new): A method as defined in claim 5 further comprising receiving the photographing conditions from a device used in photographing prior to changing the detecting level.

41 (new): A method as defined in claim 5 further comprising directly receiving the photographing conditions from a photographing means prior to changing the detecting level.